

59. The method of Claim 58, wherein determining one or more system conditions comprises determining a server load that is associated with the server computer.

60. The method of Claim 59, wherein determining the server load comprises comparing the number of data packets that are overdue to the total number of data packets.

61. A computer readable media storing instructions that when executed performs the steps comprising:

determining one or more system conditions of the server computer; and
increasing, in response to determining the system conditions, the size of the one or more data packets that are transmitted from the server computer to a client computer.

62. The method of Claim 61, wherein the data packets are not increased larger than the size of a maximum transmission unit for any intermediary network device that is in the transmission path between the server computer and the client computer.

63. The method of Claim 61, wherein the data packets are aggregated in an aggregated data packet until the size of the aggregated data packet exceeds a minimum threshold without exceeding a maximum threshold.

REMARKS

In response to the Office Action, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments. By this paper, Claims 1-6, 8-13, 15-22, and 24-63 are pending. Claims 7, 14, and 23 have been cancelled, without disclaimer or prejudice. Claims 1-6, 8, 9, 14-22, 25-35, 40-46, and 51 are rejected. Claims 10-13, 36-39, and 47-50 are objected to as being dependant upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The specific changes to the amended claims are shown on a separate set of pages hereto and entitled VERSION WITH MARKINGS TO SHOW CHANGES MADE, which follows the signature page of this Amendment. On this set of pages the insertions are underlined while the deletions are stricken through.

Discussion of Claim Rejections Under 35 U.S.C. § 102(b)

In the Office Action, the Examiner rejected Claims 1-9, 14-35, 40-46, and 51 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,197,127, to Waclawsky, et al.

Claims 1, 17, 26, 28, and 40

In one embodiment, in response to determining certain system conditions, the size of packets that are transmitted by a computing device are increased so as to improve system performance. Increasing packet size reduces the number of packets that must be transmitted when transmitting a data object of a given size. Increasing packet size also in turn causes a reduction in the consumption of overhead of system resources that are used, *e.g.*, fewer operating system calls need to be made.

Independent Claim 1 as amended, recites: "determining one or more system conditions of the server computer; and increasing, in response to determining the system conditions, the size of one or more data packets that are to be transmitted to a client computer." Independent Claim 26 recites similar limitations. Independent Claim 17 recites: "a server program for determining one or more system conditions and for, in response to determining the system conditions, repackaging at least two of the data packets into a single data packet; and transmitting the data packets to a communications network." Independent Claims 28 and 40 include similar types of limitations.

Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *See* M.P.E.P. § 2131. Applicant respectfully submits that at least the foregoing limitations are not taught or suggested by Waclawsky. Waclawsky describes an expert system for performing window-protocol based data flow analysis. Waclawsky describes managing data flow by controlling the size of a window. The window is used control the amount of data that is in transit between two users of the window protocol. *See* col. 1, lines 28-29. The window defines the number of packets that may be transmitted during a given interval. *See* col. 3, lines 43 -63. If a congestion threshold is exceeded, Waclawsky increases the size of the window up to a predetermined maximum size. *See* col. 4, lines 31.

In the Office Action the Examiner stated that Waclawsky discloses “determining, based on the *load* of a server computer, whether to aggregate one or more of the data packets into an aggregated data packet (Abstract; col. 2, lines 16-20; col. 4, lines 11-31)” (emphasis in original). Applicant respectfully submits that the cited sections do not refer to aggregating data packets. The abstract generally describes a system for analyzing data flow and optimizing data flow efficiency. The abstract fails to discuss particularly any aspect of repackaging a data packet into a larger sized data packet (“packet aggregation”). Col. 2, lines 16-20 merely describes measuring the number of packets that are stored in the window and in an associated queue. The cited section does not describe aggregating data packets in the window or in the queue. Col. 4, lines 11-31 describes increasing the size of the window during periods of network congestion. Waclawsky does not teach or suggest, in addition to this, repackaging data packets in the window to create a single larger sized data packet.

Applicant respectfully submits that Waclawsky does not teach or suggest, in certain network conditions, increasing the sizes of data packets or aggregating data packets so as to provide larger sized data packets. Waclawsky merely describes increasing a window size so as to increase the *number* of data packets that may be transmitted in a selected time interval. Waclawsky does not teach or suggest increasing, in response to determining system conditions, the size of any of the transmitted data packets. Since Waclawsky fails to teach or suggest at least this limitation, Applicant respectfully submits that these claims are in condition for allowance.

Claims 2-6, 8-16, 18-22, 24, 25, 27, 29-39, and 41-51

Since Claims 2-6, 8-16, 18-22, 24, 25, 27, 29-39, and 41-51 each depend on one of independent Claims 1, 17, 26, 28, and 40, Applicant respectfully submits that these claims are allowable for at least the reasons discussed above and the subject matter of their own limitations.

In the Office Action, the Examiner made a number of rejections of these claims based upon the knowledge of one of ordinary skill in the art. According to the Manual of Patent Examining Procedure, if an applicant traverses a rejection based upon the knowledge of ordinary skill in the art, the Examiner should cite a reference in support of his or her position. M.P.E.P. § 2144.03. Thus, Applicant respectfully requests the Examiner to provide a reference in support of

his position. For example, Applicant asks the Examiner to provide references supporting the position that the following features are known to one of ordinary skill in the art: increasing packet size (Claims 14 and 23), increasing or decreasing the number of channels that are used to transmit the streamable data objects (Claims 15, 24, and new Claim 52), increasing or decreasing the frequency of the transmission of data packets (Claims 16 and 25), and comparing the number of data packets that are overdue to the total number of data packets (Claim 42).

Furthermore, Applicant respectfully submits that Waclawsky does inherently describe the features of Claim 44. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to support the determination that the inherent characteristic necessarily flows from the teachings of the applied prior art." See M.P.E.P. § 2112. In the Office Action, the Examiner stated "the ping command is inherent in Waclawsky because the analysis and tracing of the network." Applicant respectfully submits that network analysis and tracing does *necessarily* require the use of a ping command. Applicant respectfully submits that the Examiner has failed to establish how this feature necessarily flows from the teachings of Waclawsky and has failed to provide a prima facie rejection. Thus, Applicant respectfully submits that since Waclawsky does not teach or suggest each and every element of Claim 44, this claim is not anticipated and is in condition for allowance.

Summary

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes, the reasons therefore, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and the claims would satisfy the statutory requirements for patentability without the entry of such amendments. In addition, such amendments do not narrow the scope of the claims. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is


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specifically requested. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend Claims 1, 8, 9, 15-17 and 24-26.

1. (Amended) A method of transmitting a plurality of data packets from a server computer to at least one client computer, the method comprising:

determining one or more system conditions of the server computer; and

~~modifying a process of transmitting the data packets from the server computer to the client computer, the modifying based at least in part upon the determined system conditions.~~

increasing, in response to determining the system conditions, the size of one or more data packets that are to be transmitted to from the server computer a client computer.

8. (Amended) The method of Claim 7 1, wherein the data packets are not ~~aggregated~~ increased larger than the size of a maximum transmission unit for any intermediary network device that is in the transmission path between the server computer and the client computer.

9. (Amended) The method of Claim 7 1, wherein the data packets are aggregated in an aggregated data packet until the size of the aggregated data packet exceeds a minimum threshold without exceeding a maximum threshold.

15. (Amended) The method of Claim 1, ~~wherein modifying the process of transmitting the streamable data objects from the server computer to the client computer comprises~~ additionally comprising increasing or decreasing the number of channels that are used to transmit the streamable data objects.

16. (Amended) The method of Claim 1, ~~wherein modifying the process of transmitting the streamable data objects from the server computer to the client computer comprises~~ additionally comprising either increasing or decreasing the frequency of transmission of one or more data packets that are used to transmit the streamable data objects.

17. (Amended) A server computer for transmitting data packets via a communications network, the server computer comprising:

a plurality of data packets; and

a server program for determining one or more system conditions and for ~~modifying a process of transmitting the data packets from the server computer to a client computer, the modifying based at least in part upon the determined system conditions,~~ in response to determining the system conditions, repackaging at least two of the data packets into a single data packet; and transmitting the data packets to a communications network.

24. (Amended) The system of Claim 17, ~~wherein modifying the process of transmitting the streamable data objects from the server computer to the client computer comprises~~ additionally comprising, in response to determining the system condition, increasing the number of channels that are used to transmit the streamable data objects.

25. (Amended) The system of Claim 17, ~~wherein modifying the process of transmitting the streamable data objects from the server computer to the client computer comprises~~ additionally comprising, in response to determining the system conditions, either increasing or decreasing the frequency of transmission of one or more data packets.

26. (Amended) A system for transmitting data packets from a server computer to at least one client computer, the system comprising:

means for determining one or more system conditions; and

means for, in response to determining the system conditions, increasing the size of one or more data packets that are transmitted from a server computer to a client computer. ~~modifying a process of transmitting the data packets from the server computer to the client computer, the modifying based at least in part upon the determined system conditions.~~